

PROCESSED BY  
MAY 29 1998  
FII

In re Application of	
James D. Pavley	
Application Number	Filed
06-852831	4-15-86
Group Art Unit	Examiner

Assistant Commissioner for Patents  
Washington, DC 20231

Paper No. 410

I hereby request access under 37 CFR 1.14(a)(3)(iv) to the application file record of the above-identified ABANDONED application, which is: (CHECK ONE)

(A) referred to in United States Patent Number 4952913 column \_\_\_\_\_

(B) referred to in an application that is open to public inspection as set forth in 37 CFR 1.11, i.e. Application No. \_\_\_\_\_, filed \_\_\_\_\_ on page \_\_\_\_\_, paper number \_\_\_\_\_

(C) an application that claims the benefit of the filing date of an application that is open to public inspection, i.e., Application No. \_\_\_\_\_, filed \_\_\_\_\_

(D) an application in which the applicant has filed an authorization to lay open the complete application to the public

Please direct any correspondence concerning this request to the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Calvin L. Perry  
Signature  
Calvin L. Perry  
Typed or printed name

5-29-98  
Date

FOR PTO USE ONLY	
Approved by: <u>D. Day</u> (Initials)	
Unit: <u>F.I.4.</u>	

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

# United States Patent [19]

Pauley et al.

[11] Patent Number: 4,952,913

[45] Date of Patent: Aug. 28, 1990

[54] **TAG FOR USE WITH PERSONNEL MONITORING SYSTEM**

[75] Inventors: **James D. Pauley, Estes Park; Allen E. Ripingill, Jr., Louisville, both of Colo.**

[73] Assignee: **B. I. Incorporated, Boulder, Colo.**

[21] Appl. No.: **446,212**

[22] Filed: **Dec. 4, 1989**

#### **Related U.S. Application Data**

[63] Continuation of Ser. No. 231,823, Aug. 12, 1988, Pat. No. 4,885,571, which is a continuation of Ser. No. 852,831, Apr. 15, 1986, abandoned.

[51] Int. Cl.<sup>5</sup> ..... G08B 23/00; H04B 1/34

[52] U.S. Cl. ..... 340/573; 340/514;  
340/825.49; 455/100

[58] Field of Search ..... 340/572-576,  
340/514-516, 539, 825.49; 455/100

## References Cited

## U.S. PATENT DOCUMENTS

3,478,344	11/1969	Schwitzgebel	340/312
3,882,277	5/1975	DePedro	179/2 DP
3,898,984	8/1975	Mandel	128/2.1 A
4,259,665	3/1981	Manning	340/575
4,285,146	8/1981	Charles et al.	40/21 C
4,578,539	5/1986	Townsing	379/97
4,598,275	7/1986	Ross et al.	340/573
4,622,544	11/1986	Bially et al.	340/573 X
4,665,387	5/1987	Cooper et al.	340/572
4,682,155	7/1987	Shirley	340/573
4,747,120	5/1988	Foley	379/38
4,885,571	12/1989	Pauley et al.	340/573

## FOREIGN PATENT DOCUMENTS

2141006A 12/1984 United Kingdom

#### OTHER PUBLICATIONS

A. K. Schmidt, "Electronic Monitoring Equipment", NIJ Reports, Feb. 28, 1986.  
"Judge Orders House Arrest"; LA Times; 11 Sep. 1985; Part I, p. 3.  
"State to Test Electronic Home Jail"; Albuquerque Journal; 9 Mar. 1983; pp. A-1, A-3.

"Electronic Handcuff Keeps Tabs . . ."; *The Oregonian*; 10 Mar. 1983; p. B-12.

"Computer-Age Ball & Chain"; *Arizona Republic*; 13 Mar. 1983.

"Electronic Handcuffs . . ."; *Houston Chronical*; 11 Mar. 1983.

"Big Brother . . . Test Program"; *Albuquerque Tribune*; 9 Mar. 1983; p. A-3.

(List continued on next page.)

(List continued on next page.)

*Primary Examiner*—Joseph A. Orsino

*Assistant Examiner*—Thomas J. Mullen, Jr.

*Attorney, Agent, or Firm*—Fitch, Even, Tabin & Flannery

[57] ABSTRACT

A tag for use with an individual monitoring system. The tag is worn by an individual being monitored, preferably on the ankle or leg where it can be concealed by the clothing of the individual. The tag is fully self contained and sealed. The circuits of the tag periodically generate an identification signal that includes an identification code. The identification signal modulates a stable RF signal that is transmitted in bursts of data words to a receiver associated with a field monitoring device (FMD) located at the monitoring location. In turn, the FMD may randomly establish communication with a central processing unit (CPU) located at a central monitoring location. Other information is included in the identification code of the tag, such as information indicating that an attempt has been made to remove the tag from the individual. The tag is held in place near the skin of its wearer by a conductive strap that wraps around the leg or other limb of the individual. Two capacitive electrodes, one of which is realized with the conductive strap, function as the plates of a capacitor, with the body flesh serving as the dielectric material therebetween. By monitoring an alternating signal coupled from one capacitive electrode to the other, a determination can be made as to whether the tag has remained near the body flesh. Further, because the strap is conductive, a signal can be passed therethrough and a determination can be made as to whether the strap has been broken.

11 Claims, 6 Drawing Sheets

